US Army Corps of Engineers
St. Paul District

Invasive Species

Invasive species are non-native plants and animals that have been introduced to ecosystems, become abundant and persist, displacing native species. Invasive species have significant ecological and economic impacts in this region. We deal with these species as part of our land and water stewardship at Corps projects, in planning new projects, and in ecosystem restoration efforts.

Description of Problem

Asian carp are invading the Upper Mississippi River. Plankton-feeding bighead and silver carp escaped from aquaculture. They grow rapidly up to 60 pounds. Both species have established populations in the Upper Mississippi River as far north as Pool 18. Silver carp leap out of the water when startled, creating a safety hazard for recreational boaters. Mollusk-eating black carp also escaped from aquaculture in Arkansas, Missouri, and Louisiana and threaten native mussels in the Upper Mississippi River, although no known naturally reproducing populations of this species are in the river.

Status

The interbasin connection at the Chicago Sanitary and Ship Canal is a key to limiting the introduction of additional invasive aquatic species from the Great Lakes. An electrical fish barrier was constructed on the canal near Romeoville, Illinois, in 2001; a second nearby electrical barrier was constructed in 2006. These barriers are intended to separate the Mississippi River basin from the Great Lakes basin. The effectiveness of the original barrier is still being tested. Cost of operating the second electrical fish barrier would be $70,000 per month.

We examined the technologies for limiting upriver invasion of Asian carp as part of the Upper Mississippi River-Illinois Waterway Navigation Study. Sound projection array/acoustic bubble curtain system could be installed at two dams (Locks and Dams 8, 11, 14, or 15) to test their effectiveness in deterring fish from moving through the navigation locks. Even if they deter fish from entering the locks, these barriers would be only temporary at best because carp can swim upriver through the dam gates during larger floods.

Upper Mississippi River System lockmasters can keep the upper lock miter gates closed when vessels are not transiting the locks to limit upriver passage of Asian carp through the locks.

We assisted the Minnesota Department of Natural Resources in a feasibility study on ways to slow the northward invasion of Asian carp up the Mississippi River. Action to slow the invasion is needed soon, or the fish will establish populations in the upper river.

Authority

We have existing authority for water quality, land and water stewardship under our natural resources management authorities. We have the authority to conduct Section 206 cost-shared ecosystem restoration projects and cost-shared Section 1135 ecosystem restoration work at existing Corps projects.

The draft Water Resource Development Act of 2007 would authorize an experimental sound projection

array/acoustic bubble system fish deterring barrier at Lock and Dam 11 in the Rock Island District.